BELYAYEV, A.V.

MOREKHODOV, G.A.; SHUSTOROVICH, M.L. [deceased]; BELYAYEV, A.V.;
        GRIGOR'YADI, M.G.; KOMNOVA, A.V.

        Adequate thickness of Russian leather.   Kozh.-obuv.prom.   2
        no.2:21-23  F  '60.                       (MIRA 13:5)
                    (Leather)

BELYAYEV, A.V.; GRIGORIADI, M.G.; SOLOV'YEV, N.S.; PAVLIN, A.V.

Advanced technology for drying and finishing Russian leather.
Kozh.-obuv.prom.  2  no.8:20-22  Ag  '60.            (MIRA 13:9)
                            (Leather)

BELYAYEV, A.Ya.

Tissue therapy of suppurative otitis with a preparation of fetal membranes. Vest.otorinolar. 13 no.1:26-31 Jan-Feb 51.(CIML 20:5)

1. Major, Medical Corps. 2. Of the Clinic for Diseases of the Ear, Throat, and Nose (Director--Prof.I.V.Korsakov), Turkmen State Medical Institute.

BELYAYEV, A.Ya.

Effect of the amniotic membrane tissue preparation on the restoration of hearing in otitis. Vest. otorinolar., Moskva 13 no.6:14-17 Nov-Dec 1951.

(CLML 21:2)

1. Of the Clinic for Diseases of the Ear, Throat, and Nose (Director -- Prof. I. V. Korsakov), Turkmen Medical Institute, Ashkhabad.

ACCESSION NR: AR4041523                          S/0271/64/000/005/A008/A008

SOURCE: Ref. zh. Avtomatika, telemekhanika i vy*chislitel'naya tekhnika. Svodny*y tom, Abs. 5A52

AUTHOR: Belyayev, A. Ya.; Lipman, R. A.; Negnevitskiy, I. B.

TITLE: Presentation of magnetic amplifier in the form of equivalent controlled oscillator for purposes of analysis and calculation

CITED SOURCE: Sb. dokl. Tashkentsk. politekhn. in-t, no. 3, 1963, 20-39

TOPIC TAGS: magnetic amplifier, controlled oscillator

TRANSLATION: The magnetic amplifier is considered as a controlled source of current or voltage. The output of the magnetic amplifier within certain limits depends only on the input signal and not on resistance of load, frequency, and supply voltage.  On this basis there is analyzed operation of magnetic amplifier of bridge type with self-saturation having output of direct current and one ballast resistor (magnetic amplifier with increased efficiency). There are shown advantages of calculation of characteristics of magnetic amplifier in the form of controlled

Card 1/2

ACCESSION NR: AR4041523

source over method of usual calculation. Under assumptions that hysteresis loop, ideally is rectangular, active resistance of operation coils is equal to zero, diodes are ideal, and so forth, it is shown that magnetic amplifier has maximum efficiency of 50% during equality of load and ballast resistors. Results are given of experiment for magnetic amplifier with cores OL 20/25-5 at a frequency of 400 cps and a supply voltage of 23 v. Six illustrations. Bibliography: 5 references.

SUB CODE: EC                          ENCL: 00

Card 2/2

The manner in which the rate of combustion of priming explosives depends upon the pressure. A. F. Belyaeva and A. K. Belyaev. *Doklady Akad. Nauk S.S.S.R.* 56, 491-4(1947); *Chem. Zentr.* (Russian Zone Ed.) 1948, II, 555-6; cf. *C.A.* 41, 4310h; 43, 1962b.—Mercuric fulminate, trinitrotriazidobenzene, and tricycloacetone peroxide (I) were used for the expts. reported. They were compressed to cylinders (3-4 by 5-7 mm.) under 300 atm. These were placed under a bell jar sufficiently large so that the pressure would be changed only slightly after combustion. A hot wire was used to start combustion. The rate of reaction was recorded photographically by using moving film. The relation between the rate of combustion and the pressure was shown to be linear ($u = A + bp$), as had already been found by Andreev (cf. *C.A.* 35, 6457?) for secondary explosives. The data obtained for I did not show a completely linear relationship. $A = 0$ for I. Of the various explanations which have been offered to explain this linear relationship, the most satisfactory seems to be that the rate of combustion depends upon the reaction in the gas phase, where the rate would naturally be proportional to the pressure. M. G. Moore

BELYAYEV, B., inzh.

Using diluted bitumens in curing concrete. Avt.dor. 24 no.2:11-12
F ' 61.
            (Concrete—Curing)    (Bitumen)

BELYAYEV, B.A. (g.Bal'tiysk)

Defective eye sight caused by congenital anomaly in the development of the eye. Vest.oft. 69 no.5:93 S-O '56.     (MLRA 9:12)
(EYE--DISEASES AND DEFECTS)

SVIATOSLAVOV, Nikolay Ivanovich, kand.tekhn.nauk; BELYAYEV, Boris
    Alekseyevich; KOKORIN, V.V., retsenzent; KRYUKOV, V.M.,
    spetsred.; ORLOVA, L.A., red.; KNAKNIN, M.T., tekhn.red.

[Cotton opening and picking equipment] Razrykhlitel'no-
trepal'nyi agregat dlia khlopka. Moskva, Gos.nauchno-tekhn.
izd-vo lit-ry po legkoi promyshl., 1959. 130 p.      (MIRA 13:3)

1. Glavnyy konstruktor zavoda Kustekstil'mash.(for Belyayev).
                (Cotton machinery)

BELYAYEV, B.I., inzh.

Destruction of two air preheaters of a blast furnace during test-
ing.  Prom.stroi.  38  no.3:39-44  '60.          (MIRA 13:6)
        (Air preheaters)  (Blast furnaces)

30809
S/537/60/000/041/001/005
DC3 4/D113

*16.6500*

AUTHORS:   Mazmishvili, A.I., Professor and Belyayev, B.I., Candidate of
Technical Sciences, Scientific Co-Worker of the Department of
Mine Surveying (See Association)

TITLE:   Contribution to the problem of constructing a system of group
adjustment in generalized Gaussian algorithms

SOURCE:   Moscow. Institut inzhenerov geodezii, aerofotos"yemki i
kartografii. Trudy, no. 41, 1960, 15-17

TEXT:   Considering the theorems put forward in a previous article by A.I.
Mazmishvili (Ref. 2:   Izvestiya VUZ'ov.  Geodeziya i aerofotos"yemka No 3,
1959), the following expanded block matrix is developed using conditional
measurements:

$$\left\| \begin{array}{cccc} AA^* & AB^* & AC^* & W_1 S_1 \\ BA^* & BB^* & BC^* & W_2 S_2 \\ CA^* & CB^* & CC^* & W_3 S_3 \end{array} \right\| \cdot \qquad (1)$$

Card 1/3?

Contribution to the ...

By triangular transformation, the matrix (1) assumes the form:

$$
\begin{Vmatrix}
AA^* & AB^* & AC^* & W_1 & S_1 \\
 & [BB^*1] & [BC^*1] & [W_21] & [S_21] \\
 & & [CC^*2] & [W_32] & [S_32]
\end{Vmatrix} \quad , \tag{2}
$$

where
$$
\left.
\begin{aligned}
{[BB^*1]} &= BB^* + BA^* \, \rho_{AB} \\
{[BC^*1]} &= BC^* + BA^* \, \rho_{AC} \\
{[W_2^*1]} &= W_2^* + W_1^* \, \rho_{AB} \\
{[S_2^*1]} &= S_2^* + S_1^* \, \rho_{AB}
\end{aligned}
\right\} \quad , \tag{3}
$$

$$
\left.
\begin{aligned}
{[CC^*2]} &= CC^* + CA^* \rho_{AC} + [CB^*1]\rho_{BC} = [CC^*1] + [CB^*1]\rho_{BC} \\
{[W_3^*2]} &= W_3^* + W_1^*\rho_{AC} + [W_2^*1]\rho_{BC} = [W_3^*1] + [W_2^*1]\rho_{BC} \\
{[S_3^*2]} &= S_3^* + S_1^*\rho_{AC} + [S_2^*1]\rho_{BC} = [S_3^*1] + [S_2^*1]\rho_{BC}
\end{aligned}
\right\} \, , \tag{4}
$$

Card 2/87

Contribution to the ...

$$\rho_{AB} = -Q_{AA}AB* \atop \rho_{AC} = -Q_{AA}AC* \Big\} ,$$ (5)

$$\rho_{BC} = -\left[Q_{BB}^{-1}\right]\left[BC*1\right] .$$ (6)

Using the elements (1) and (2) and the rule for developing a generalized
Gaussian algorithm, the three-group adjustment process can be represented
according to the system shown in table 1, in which the mutual transposed
matrices of the coefficients of the conditional equations are shown (numbers
1 and 2). By multiplication of these two matrices, a block matrix (number
3) of the coefficients of the normal equations of the correlates is obtain-
ed. The elements of the block matrices, nos. 5 and 6, may be determined
according to formulas 3 and 4. The conditional equations of the figures
are usually included in the first group. Therefore, the elements of the
inverse matrix $Q_{AA}$(number 5) are numerically equal, along the main diagonal,
to the quotients of dividing the unit by the corresponding square coeffi-
cients of the AA* matrix, all the other elements being equal to zero. The

Card 3/7

Contribution to the ...

order of the $Q_{AA}$, $\rho_{AB}$ and $\rho_{AC}$ group of matrices in the system is designated by
the number 4, number 5 standing for the block matrices of the transformed
coefficients of the second group; they may be found according to the fol-
lowing law: each element of the matrix of the transformed coefficients is
equal to the corresponding element of the original matrix minus the algebraic
sum of the products of each element of the row by each element of the column
of matrices included in the transformation formula as subtrahends. The solu-
tion to the transformed normal equations of the correlates of the second
group is shown in system 6, in which the correlates of the second group and
the elements of the inverse matrix $[Q_{BB}{}^{-1}]$, essential for finding the operator
(6), are calculated simultaneously. The inverse matrix $[Q_{BB}{}^{-1}]$ and the operator
$\rho_{BC}$ are shown in system 7. Using formulae (4), the elements of the block
matrix of the transformed coefficients of the normal equations of the corre-
lates of the third group are similarly determined. A solution to these
equations is given in system 9. The transformation of the coefficients of
the normal equations of the correlates is controlled according to the for-
mulas:

Card 4/8?

X

Contribution to the ...

$$[\overline{BB*]} \quad + \quad [\overline{CB*]} \quad +[\overline{W_2 * ]} = [\overline{S_2 *]} \tag{7}$$

$$[\overline{CC*2]} + [\overline{W_3 *2]} = [\overline{S_3 \cdot 2]} \tag{8}$$

The transformed coefficients of the conditional equations of the second (10) and third (11) groups are calculated according to the following formulas:

$$\left. \begin{aligned} B_o* &= B* + A*\rho_{AB} \\ C_o* &= C* + A*\rho_{AO} \end{aligned} \right\}, \tag{9}$$

$$C_{oo}* = C_o* + B*\rho_{BC} \cdot \tag{10}$$

Numbers 11 and 13 show columns containing the second and third corrections which may be determined according to the formulas:

Card 5/8?

Contribution to the ...

$$V'' = B_o * K_1'' * + C_o * K_2''$$

$$V''' = C_{oo} * K'''$$

$$\left. \right\}$$

(11)

The final corrections

$$V = V' + V'' + V'''$$

(12)

are written in column 14.  The second and third corrections are calculated
using the equations

$$\left[ V''^2 \right] = - \Sigma K'' \left[ W_2 * 1 \right]$$

$$\left[ V'''^2 \right] = - K''' \left[ W_3 * 2 \right]$$

$$\left. \right\}$$

(13)

Comparing the second and third corrections with the data previously obtained
by A.I. Kobylin (Ref. 1:  Gruppovoye uravnoveshivaniye rudnichnoy triangulya-
tsii [Group adjustment of mining triangulation].  Metallurgizdat, 1955,

Card 6/8

Contribution to the ...

3C809
S/537/60/000/041/001/005
DO34/D113

p. 69) it is found that they coincide with an approximation of 0.1". The principle of constructing a system by adjustment based on the method of four and more groups remains identical. Reference is made to the work of I.Yu. Pranis-Pranevich in connection with the problem of three-group adjustment. There are 2 tables and 4 Soviet references. [Abstracter's note: Essentially complete translation].

ASSOCIATION:   Kafedra geodezii Moskovskogo instituta inzhenerov geodezii, aerofotos"yemki i kartografii (Department of Geodesy of the Moscow Institute of Engineers of Geodesy, Aerial Photography and Cartography) (Mazmishvili, A.I.);  Kafedra marksheyderskogo dela Moskovskogo gornogo instituta im. I.V. Stalina (Department of Mine Surveying of the Moscow Mining Institute im. I.V. Stalin) (Belyayev, B.I.).

Card 7/8)

X

S/035/62/000/007/077/083
A001/A101/

AUTHORS:      Mazmishvili, A. I., Belyayev, B. I.

TITLE:        Adjustment and evaluation of accuracy by the method of groups in indirect and conditional measurements

PERIODICAL:   Referativnyy zhurnal, Astronomiya i Geodeziya, no. 7, 1962
              27, abstract 7G200 ("Tr. Mosk. in-ta inzh. geod., aerofotos"yemki i kartogr.", 1961, no. 48, 3 - 78)

TEXT:        See for the beginning RZhAstr, 1962, 5G220. The authors consider the evaluation of accuracy of adjustment results by means of block orthogonalization of initial equations. Advantages of this method are noted: Rigorosity, iteration (in the form of calculation organization), finite number of necessary operations, common features (known procedures of group adjustment are special cases of block orthogonalization), etc. There is given a summary of formulae for adjustment of measurements and evaluation of accuracy. An example is presented (various variants of adjusting a second-class leveling network with 21 units). There are 10 references.

[Abstracter's note: Complete translation]                    N. Drozdov

Card 1/1

MAZMISHVILI, A.I., doktor tekhn.nauk, prof.; BELYAYEV, B.I., kand.tekhn. nauk, dotsent, nauchnyy sotrudnik

Joint adjustment and accuracy evaluation using the method of groups in indirect and conditional measuring. Trudy MIIGAIK no.48:3-78 '61.                                                    (MIRA 15:8)

1. Kafedra geodezii Moskovskogo instituta inzhenerov geodezii, aerofotos"yemki i kartografii (for Mazmishvili). 2. Kafedra marksheyderskogo dela Moskovskogo gornogo instituta (for Belyayev). (Leveling)

MAZMISHVILI, A.I., prof.,doktor tekhn.nauk; BELYAYEV, B.I., dotsent,
kand.tekhn.nauk

Consistency of balancing by the group method in indirect
and conditional measurements.  Trudy MIIGAIK no.47:3-26 '61.
(MIRA 15:7)

1.  Kafedra geodezii Moskovskogo instituta inzhenernoy
geodezii, aerofotos"yemki i kartografii.
(Groups, Theory of)
(Geodesy)

L 17866-63          EWT(m)/BDS    AFFTC/ASD          S/0048/63/0027/007/923/926
ACCESSION NR: AP3003697

AUTHOR: Belyayev, B.I; Kalyamin,A.V.; Murin, A.N.

TITLE: Excitation functions of nuclear reactions occurring incident to fast pro-
ton bombardment of Bi209 /Report of the Thirteenth    Annual Conference on Nucl-
ear Spectrosopy held in Kiev from 25 January to 2 February 1963/

SOURCE: AN SSSR, Izv.Seriya fizicheskaya, v.27, no.7, 1963, 923-926

TOPIC TAGS: spallation, proton induced reaction , isotope production cross sec-
tion , Bi209

ABSTRACT: The present work was a continuation of earlier studies (B.I.Belyayev,
A.V.Kalyamin and A.N.Murin, Doklady AN SSSR, 140, 337, 1961 and A.V.Kalyamin, A.N.
Murin and B.K.Preobrazhenskiy, Izv.AN SSSR,Ser.fiz.,26, 245, 1962) of the yields
of spallation of bismuth-209. The present paper gives new and refined data on the
cross sections for the formation of the nuclides resulting from bombardment of a
bismuth oxide or metallic Bi209 with protons having energies from 0.135 to 10 GeV.
In all 48 irradiations lasting from 15 min to 4 hours were performed on the syn-
chrocyclotron and proton synchrotron of the Ob"yedinenny*y institut yaderny*kh
issledovaniy--OIYaI (Joint Institute for Nuclear Research). The

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products were separated radiochemically and investigated by means of an ioniza-
tion chamber, a scintillation gamma-spectrometer and a $4\pi$ gamma and Kx radiation
detector. The yields are referred to the yield of the $Al^{27}(p,3pn)Na^{24}$ reaction.
Values of the cumulative or direct cross sections at five proton energies are ta-
bulated for 46 isotopes of the different elements detected among the reaction pro-
ducts. The results should be a useful guide in selecting the irradiation condi-
tions for maximizing the yield of specific isotopes. "The authors are grateful to
members of the Laboratoriya yaderny*kh problem (Laboratory of Nuclear Problems),
I. A. Yutlandov, V. N. Pokrovskiy and I. Yu. Levenberg, for support and assistance
in the work, and to V. N. Mekhedov and V. N. Ry*bakov for their interest and col-
laboration in carrying out the irradiations on the proton synchrotron. Orig. art.
has: 1 table.
ASSOCIATION: none

SUBMITTED: 00            DATE ACQ: 02Aug63            ENCL: 00

SUB CODE: NS             NO REF SOV: 007              OTHER: 003

Card 2/2

/2

Hard cutting alloy. B. I. Belyaev and I. S. Gaev. Russ. 32,158, Sept. 30, 1933. A mixt. of W carbides with free C and a cementing metal or alloy is baked.

BELIAEV, I. I. and others
    Spravochnik montazhnika stal'nykh konstruktsiy.
    Moscow, 1948.
    622p.

A reference manual for steel construction workers, dealing with equipment, tools, and
theoretical data (mathematics, physics, electro-techniques, strength calculations, etc.)
necessary in steel construction; published by Government Edition of Construction Lit-
erature.

BELIAYEV, B.I.

Remarks on A.V.Beliaev's article "Effect of errors made in constructing
and installing metal constructions upon the dimensions and shape of
bridges, skyscrapers, and other structures."  Izv.AN SSSR Otd.tekh.nauk
no.4:602-606 Ap '53.                                        (MLRA 6:8)
                    (Bridges, Iron and steel)  (Building, Iron and steel)
                                               (Beliaev, A.V.)

BELYAYEV, B. I.

USSR/Engineering - Structural technology

Card        : 1/1   Pub. 106 - 3/9

Authors     : Belyaev, B. I. and Lashkov, A. D., Engineers

Title       : Technological characteristics in preparing steel structures for the large
              culture and science building in Warsaw, Poland

Periodical  : Stroi. prom. 7, 13 - 18, July 1953

Abstract    : Technological data are presented on the manufacture and assembly of vari-
              ous steel structures for the culture and science building in Warsaw,
              Poland.  Illustrations, drawings; diagrams.

Institution :  ...

Submitted   :  ...

BELYAYEV, B.I., inzhener.

Approximation method of calculating bottoms of steel tanks.
Stroi.prom.32 no.1:35-37 Ja '54.                    (MLRA 7:2)
                                                    (Tanks)

BELYAYEV, B.I., inzhener.

Statistical method of calculating normal stress in structural steel
elements. Stroi.prom. 32 no.3:32-37 Mr '54.                (MLRA 7:5)
          (Steel, Structural) (Strains and stresses)

BELYAYEV,B.I., inzhener, laureat Stalinskoy premii

On the yield point in large, thick, rolled sections of St.3 quality
steel.  Stroi.prom.33 no.8:32-34 Ag'55.          (MLRA 8:11)
                    (Steel, Structural)

SOV/137-57-10-19092

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 95 (USSR)

AUTHOR:     Belyayev, B.I.

TITLE:     Hot-rolled Section Inventory Needs for Structural Purposes
(Trebovaniya k sortamentu goryachekatanykh profiley prokata
dlya stroitel'nykh konstruktsiy)

PERIODICAL:   V sb.: Ratsionalizatsiya profiley prokata. Moscow, Profiz-
dat, 1956, pp 159-162

ABSTRACT:   Note is taken of the need for improving the quality of beams,
the inventory of which should be expanded by adding Nrs 65 and
70. The symmetrical angle has become obsolete, and of 100
sections in this category (under OST All-Union Standard 10014-
39), 40 are superfluous. The 6th 5-Year Plan should provide
for the construction of a wide-flanged I-beam rolling mill at
the Novo-Lipetskiy Plant  [ at Lipetsk; Transl. Ed. Note] .
Critical remarks are presented on some of the papers heard at
the conference.

Card 1/1                                                    V:D.

BELYAYEV, B.I., inzhener.

Scientific and technical conference on an improved assortment of rolled shapes. Stroi.prom. 34 no.1:46-48 Ja '56.     (MLRA 9:5)
(Moscow--Rolling (Metalwork)--Congresses)

BELYAIEV, B.I., inzhener.

Using low-alloy steel for construction elements.  Stroi.prom. 34
no.4:24-27 Ap '56.                                     (MLRA 9:8)
                    (Building, Iron and steel)

BELYAYEV, B.I., inzhener.

Stability loss in steel structures. Stroi.prom.34 no.12:25-31 D '56.
(Strains and stresses) (MLRA 10:2)
(Steel, Structural)

BELYAYEV, B.I.

Statistical calculation method for reinforced concrete structural
components.  Stroi.prom. no.8:32-37 Ag '57.        (MIRA 10:10)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR.
         (Structures, Theory of)   (Reinforced concrete)

BELYAYEV, B.I.

Dimensional tolerances for precast construction elements and details.
Stroi. prom. 36 no.3:28-31 Mr '57.                    (MIRA 11:3)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury.
        (Tolerance (Engineering)--Tables, calculations, etc.)
                (Precast concrete construction)

YAKUBOVSKIY, F.B., red.; BELYAYEV, B.I., red.; VOLNYANSKIY, A.K., red.;
     KAMINSKIY, D.N., red.; KOL'TSOV, A.G., red.; KUREK, N.M., red.;
     OVSYANKIN, V.I., red.; PRIVALOV, N.N., red.; KHRAMUSHIN, A.M.,
     red.; ERISTOV, V.S., red.; UDOD, V.Ya., red.izd-va; TEMKINA,
     Ye.L., tekhn.red.

[Papers and reports of the section on industrial construction,
assembling and specialized work of the All-Union Conference on
Construction] Doklady i soobshcheniia. Moskva, Gos.izd-vo lit-ry
po stroit., arkhit. i stroit.materialam, 1958.  438 p.
                                                        (MIRA 12:7)
1. Vsesoyuznoye soveshchaniye po stroitel'stvu. Moscow, 1958.
Sektsiya promyshlennogo stroitel'stva, montazhnykh i spetsializi-
rovannykh rabot.
                        (Building)

SOV/28-58-6-11/34

AUTHOR:      Belyayev, B.I., Active Member of the USSR Academy
             of Architecture

TITLE:       The Control of the Quality of Construction Steel
             (Kontrol' kachestva stroitel'noy stali)

PERIODICAL:  Standartizatsiya, 1958, Nr 6, pp 45-47 (USSR)

ABSTRACT:    The quality of construction steel is controlled
             by taking samples from current production. These
             are tested for resistance, yield, relative length-
             ening, etc. The state standards for the minimum
             reject limit are usually higher than the yield
             or resistance limits. For steel of type St. 3
             in the State Standard GOST 380-57, the minimum
             reject limit for yield in rolled material 40 mm
             thick is established at 24 kg/mm$^2$ whereas the
             yield limit is 21.6 kg/mm$^2$. Great quantities of
             steel are rejected, therefore, which would be
             suitable for the purpose. A statistical method
Card 1/2     of control is recommended, in which the average

SOV/28-58-6-11/34

The Control of the Quality of Construction Steel

quality of production during a month, quarter, or year is determined. If the average quantity is above the desired value, the whole production may be used. If it is lower, changes must be made in the steel composition, the production process, etc. There is 1 graph.

Card 2/2

*BELYHYEV, B.I.*

BELYAYEV, P.I.

Using low-alloy steels for construction elements. Nov. tekh. i pered. op. v stroi. 20 no.3:19-22 M '58.                    (MIRA 11:3)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR.
       (Steel alloys)

BELYAYEV, B.I.

BELYAYEV, B.I.

Safety of welded frames of industrial buildings constructed before the war. Stroi. prom. 36 no.1:44-45 Ja '58.                    (MIRA 11:1)
(Precast concrete construction)

BELYAYEV, B.I.

Most efficient number of cranes and the time for carrying out
the assemblage. Stroi. prom. 36 no.9:33-37 S '58.
(MIRA 11:10)
1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury
SSSR.
(Cranes, derricks, etc.)   (Precast concrete construction)

GUDKOV, V.M., dots.; BELYAYEV, B.Ia, kand.tekhn.nauk

Placing of mine plumbs during orientation through one vertical
shaft with calculation of the effect of an air current.  Izv.vys.
ucheb.zav.; gor.zhur.  no.2:57-60  '60.                    (MIRA 14:5)

1. Moskovskiy gornyy institut.
                          (Mining engineering)

BELYAYEV, B.I.

Loss of local stability in shafts of steel television towers.
Prom.stroi.  8  no.7:31-34  '60.                    (MIRA 13:7)
        (Strains and stresses)  (Kurgan—Television—Antennas)

BELYAYEV, B.I.

Rated strength of the NL2(15XSND) rolled steel.  Prom.stroi.
38  no.1:35-36  '60.                              (MIRA 13:5)
                    (Steel)

NASONOV, V.N., BELYAYEV, B.I., BALDIN, V.A., TARANOVSKIY, S.V.,
KHOKHARIN, A.Kh.

Possibilities of using aluminum and alluminum alloys in construc-
tion. Prom. stroi. 38 no.8:36-39 '60.           (MIRA 13:8)
   (Alluminum alloys)     (Aluminum, Structural)

BELYAYEV, B.I.

The most efficient method for combining construction elements into
assembly blocks.  Prom. stroi. 38 no.10:36-41 '60.        (MIRA 13:9)
                    (Precast concrete construction)

S/035/62/000/005/096/098
A055/A101

AUTHOR:      Belyayev, B. I.

TITLE:       Method of I. Yu. Pranis-Pranevich in the light of block matrices

PERIODICAL:  Referativnyy zhurnal, Astronomiya i Geodeziya, no. 5, 1962, 40,
             abstract 5G227 ("Nauchn. tr. Mosk. gorn. in-t", 1961, no. 36,
             111 - 114)

TEXT:        A matrix formulation of the method of Pranis-Pranevich is given.
It is pointed out that group adjustment of indirect measurements can be effected,
according to A. I. Mazmishvili, by the orthogonal transformation of the block
matrix in the quasi-diagonal form.  In that case, the division of the geodetic
network into sections ceases to be obligatory, and the groups prove totally
(and not partly) independent.  It is asserted that the method of Pranis-Prane-
vich is a consequence of the Mazmishvili general theory of group adjustment.

                                              O. Sh.

[Abstracter's note:  Complete translation]
Card 1/1

BELYAYEV, B.I.

       Designing steel pipelines for strength.  Stroi. truboprov.  6
       no.3:12-15  Mr  '61.                                                    (MIRA 14:3)

      1. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR.
          (Pipe, Steel)    (Gas, Natural--Pipelines)

BELYAYEV, B.

Rewards for inventors in construction for the transportation
industry.  Avt. dor. 24 no.7:6  Jl '61.                    (MIRA 14:7)

1. Zamestitel' nachal'nika Tekhnicheskogo upravleniya
Mintransstroya.
 (Rewards (Prizes, etc.))  (Transportation--Buildings and structures)

BELYAYEV, D.I.

Rated resistance of structural carbon steel. From. st-oi. 5ç
no. 2:39-41 '61.                                    (MIRA 14:2)
                    (Steel, Structural—Testing)

BELYAYEV, B.I.

Precision in preparing and assembling steel elements. Prom. jtroi. 39
no.4:41-46 '61.                                              (MIRA 14:6)
                    (Steel, Structural)

BELYAYEV, B.I.; BALDIN, V.A.; SOKOLOVSKIY, P.I.

High-strength low-alloy steel for building elements. Prom.
stroi. 39 no.5:26-29 '61.                           (MIRA 14:7)
            (Steel, Structural)

BELYAYEV, B.I.

Rigidity losses of steel elements under prestressing. Prom. stroi. 39 no.7:15-18 '61.                    (MIRA 14:7)
                    (Concrete reinforcement)

BELYAYEV, B.I.

Let's use automatic welding more widely in the manufacture and
assembly of structural elements. Prom.stroi. 39 no.8:62-64
'61.
(MIRA 14:9)
(Welding—Congresses)

BELYAYEV, B.I.

      Reliability of structural elements.  Prom.stroi.  40 no.6:19-22
      '62.                                  (MIRA 15:6)
          (Building materials—Testing)

AYDAROV, G.A., inzh.; BELYAYEV, B.I., inzh.; LEVIN, L.I., inzh.;
RYABOV, A.F., inzh.; SAKHNOVSKIY, M.M., kand. tekhn.
nauk; CHESNOKOV, A.S.; SHILOVTSEV, D.P.; GAY, A.F., kand.
tekhn.nauk, nauchn. red.; GORDEYEV, P.A., red.; GOL'BERG,
T.M., tekhn. red.; RODIONOVA, V.M., tekhn. red.

[Manufacture of steel structures] Izgotovlenie stal'nykh
konstruktsii. Moskva, Gosstroiizdat, 1963. 401 p.
(MIRA 16:8)
(Steel, Structural)

BELYAYEV, B.I.

Optimum capacity of structural elements plants. Prom. stroi. 40
[i.e. 41] no.4:42-46 Ap '63.                              (MIRA 16:3)
                    (Building materials industry)

BELYAYEV, B.I.

New regulations for the manufacture, assembly and inspection of
steel elements.  Prom. stroi.  40 [i.e. 41],  no.5:32-37  My  '63.
(MIRA 16:5)

(Steel, Structural)

BELYAYEV, B.I.

Optimum consolidation of structural elements in plants.  Prom.
stroi.  40  no.8:18-22  Ag  '63.
(Building materials)                          (MIRA 16:8)

BELYAYEV, B.I.

Calculating the joints for high-strung bolts. Prom. stroi. 41 no.2:
21-23  F  '64.

(MIRA 17:3)

BELYAYEV, B.I., dotsent, kand. tekhn. nauk

New adjustment in groups by successively expanding corrections according to the absolute terms of conditional equations. Izv. vys. ucheb. zav.; geod. i aerof. no.5:19-32 '64.                    (MIRA 18:5)

1. Universitet druzhby narodov imeni Patrisa Lumumby. Rekomendovana kafedroy geodezii.

BELYAYEV, B.I.

Using carbon rimmed steel for structural elements.  Prom.
stroi. 41 no.5:35-37  My '64.                    (MIRA 18:11)

BELYAYEV, B.I.

Ensure a thorough investigation of the causes of building failures.
Prom. stroi. 42 no.8:31-33  '65.                            (MIRA 18:9)

BELYAYEV, B.I.

International system of tolerances for structural elements. Prom.
stroi. 42 no.11:23-25  N '64.                                    (MIRA 18:8)

BELYAYEV, B.I.

More on the statistical method of designing construction
elements. Prom. stroi. 43 no. 11:25-30 '65.     (MIRA 18:12)

BALDIN, V.A.; BELYAYEV, B.I.; SOKOLOVSKIY, P.I.; SHEYNFEL'D, N.M.;
ARONE, R.G.

Steels of increased and high strength for structural elements.
Prom. stroi. 41 no.1:17-21 Ja '64.                    (MIRA 17:6)

BELYAYEV, B. I.

BELYAYEV, B. I.:  "A geometrical analysis of hydrogeological characteristics."
Moscow, 1955.  Min Higher Education USSR.  Moscow Mining Inst imeni I. V.
Stalin.  (Dissertation for the Degree of Candidate of Technical Sciences)

SO:  Knizhnaya Letopis' No. 47, 19 November 1955.  Moscow.

LYUBMAN, I.B., gornyy inzh.; BELYAYEV, B.I., kand.tekhn.nauk

Reverse order of mine orientation using a single plumb bob. Nauch. trudy MGI no.18:145-160  '57.                                    (MIRA 11:9)
                        (Mine surveying)

SOV/154-58-1-4/22

AUTHORS:     Gudkov, V. M.,  Candidate of Technical Sciences
             Belyayev, B. I.,  Candidate of Technical Sciences

TITLE:       Determining the Lack of Alignment in the Testing of Horizontal
             Displacement of Foundations of Water Power Structures
             (Opredeleniye otkloneniy tochek ot stvora pri izuchenii
             gorizontal'nykh smeshcheniy osnovaniy gidrotekhnicheskikh
             sooruzheniy)

PERIODICAL:  Izvestiya vysshikh uchebnykh zavedeniy. Geodeziya i aero-
             fotos"yemka, 1958, Nr 1, pp 35-4o (USSR)

ABSTRACT:    In recent years a great number of water power structures
             have been built on soft ground. One of the best methods for
             testing the stability of the individual parts of the struc-
             tures in the horizontal plane is the study of horizontal
             displacement by means of range observations. The method of
             such observations was suggested by the Moskovskiy institut
             inzhenerov geodezii, aerofotos"yemki i kartografii (MIIGAiK)
             (Moscow Engineering Institute of Geodesy, Aerophotography
             and Cartography). For stability test in the structures of
Card 1/3  ·  hydro-electric power stations a range line is used. This

SOV/154-58-4/22

Determining the Lack of Alignment in the Testing of Horizontal Displacement
of Foundations of Water Power Structures

line consists of a series of fixed range points. The end points
of the range line serve as bases and are included in the
triangulation net. The range line is checked at regular
intervals. The main task is to determine the displacements
of range points in a direction normal to the range line.
There are such ranges in the Tsimlyansky and Kuybyshevsky
hydroelectric power systems. They were fitted with stations of
special design. The stations were worked out in the MIIGAiK
under the direction of M. S. Murav'yev. M. S. Murav'yev de-
veloped a method of range observation by means of moveable
stations. This method was applied in the construction of the
Tsymlyansk hydro-electric power station. The author suggests
a system of range-observations according to two patterns:
survey of half a range and survey of a quarter of a range.
At the same time the shortcomings of this method are dis-
cussed. For the same purpose, Professor A. I. Durnev proposed
the method of eyepiece micrometry. But this micrometer, too,
has its shortcomings.
Therefore, in order to reduce the scope of out-door work and
to simplify range observations, another method of range measure-

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SOV/124-?-1-?/22

Determining the Lack of Alignment in the Testing of Horizontal Displacement
of Foundations of Water Power Structures

ments was recommended. This method can be applied to ranges
with MIIGAiK-type marks and sighting signs. According to
this method the measuring procedure comprises the consecutive
determination of the deviation of every single mark (range
point) from the range between two neighboring points. This
method permits the determination of the deviation of the
points from the range even if there are obstacles in the line
from A to B. As sights are taken on shorter distances this
method requires a shorter time of out-door observations than
the method of moveable marks. The scope of calculations how
ever is larger in this method. There are 4 figures and 1 ref-
erence, 1 of which is Soviet.

ASSOCIATION:   Moskovskiy gornyy institut (Moscow Mining Institute)

Card 3/3

BELYAYEV, B.I., kand. tekhn. nauk

Analyzing the hydrogeology of Moscow Basin deposits using the method of mine geometry. Izv. vys. ucheb. zav.; gor. zhur. no.12: 21-32 '58. (MIRA 12:8)

1.Moskovskiy gornyy institut.
(Moscow Basin--Coal geology)
(Mine water) (Prospecting)

BELYAYEV, B.I.

PHASE I BOOK EXPLOITATION                    SOV/3760

Mazmishvili, Abram Ivanovich, and Boris Ivanovich Belyayev

Sposob naimen'shikh kvadratov (Method of Least Squares) [Riga] Geodezizdat, 1959. 370 p. Errata slip inserted. 6,500 copies printed.

Ed.: F.F. Pavlov; Ed. of Publishing House: A.I. Shurygina; Tech. Ed.: Yu.S. Shul'kina.

PURPOSE: This book is a textbook for students of surveying and geodesy at mining institutes, and can also be used as a manual by engineers in surveying and geodetic organizations who wish to become familiar with the problems of adjustment operations.

COVERAGE: The theory of the subject was written by Professor A.I. Mazmishvili, Doctor of Technical Sciences, and is based on material of lectures given by the author to students specializing in surveying at the Moscow Mining Institute imeni I.V. Stalin from 1952 to 1958. The book discusses problems of the theory of errors and the method of least squares in connection with the Legendre principle and in the light of orthogonal transformations of

Card 1/6

9

MAZMISHVILI, A.I., prof.; BELYAYEV, B.I., kand.tekhn.nauk, nauchnyy sotrudnik

Constructing the scheme of group adjustment in generalized Gauss
algorisms. Trudy MIIGAIK no.41:15-18 '60.          (MIRA 13:11)

1. Kafedra geodezii Moskovskogo instituta inzhenerov geodezii,
aerofotos"yemki i kartografii (for Mazmishvili).  2. Kafedra mark-
sheyderskogo dela Moskovskogo gornogo instituta imeni I.V.Stalina
(for Belyayev).
          (Triangulation)          (Algorism)

MAZMISHVILI, A.I., prof.; BELYAYEV, B.I., kand.tekhn.nauk, nauchnyy
sotrudnik

Generalized Gaussian system for the solution of normal equations.
Trudy MIIGAIK no.42:3-18 '60.                    (MIRA 14:9)

1. Kafedra geodezii Moskovskogo instituta inzhenerov geodezii,
aerofotos"yemki i kartografii (for Mazmishvili). 2. Kafedra
marksheyderskogo dela Moskovskogo gornogo instituta imeni I.V.
Stalina (for Belyayev).

                 (Matrices)

S/044/62/000/003/066/092
AUTHOR:       Belyayev, B. I.                  C111/C444

TITLE:        The method of I. Yu. Pransis-Pranevich from the point of
              view of the block matrices

PERIODICAL:   Referativnyy zhurnal, Matematika, no. 3, 1962, 45,
              abstract 3V229. ("Nauchn. tr. Mosk. gorn. in-t", 1961, no.
              36, 111-114)

TEXT:         An adjustment method with respect to groups is described,
which is only partially independent since a connecting system does exist.
First all the groups are transformed by a triangle transformation, then
the connecting system is solved and in the inverted succession the
partially independent variables are determined. It is shown, that from
every equation group all partially independent variables, except for the
connecting ones, can be eliminated succesively.

[Abstracter's note: Complete translation.]


Card 1/1

*16. 6200*

AUTHORS:    • Kazmishvili, A. I., Belyayev, B. I.

TITLE:      The things in common of the weighing according to the group
            method at indirect and relative measurements

PERIODICAL: Referativnyy zhurnal, Matematika, no. 5, 1962, 41-42,
            abstract 5V201. ("Tr. Mosk. in-ta inzh. geod. aerofoto-
            syemki i kartogr.," 1961, vyp. 47, 3-26)

TEXT:       One describes the theory of the group method at indirect and   *JB*
relative measurements. One considers the transformation process for four
groups. Formulas for the corrections of the results of the immediate
measurements at indirect and relative measurements are found. A combi-
nation of the formulas into four groups with respect to the corrections
is given. The correctness of the theoretical considerations and of the
obtained formulas is shown by the example of the weighing of a nivelling
net in four variations: according to the method of indirect measurements
(together and in two groups) and according to the method of relative
measurements (together and in two groups). One points to the fact that
all four variants show the same results. Bibliography with 12 titles.
[Abstracter's note: Complete translation.]
Card 1/1

MUZAL'KOV, Mikhail Ivanovich; BELYAYEV, B.I., otv. red.; SLAVOROSOV,
    A.Kh., red.izd-va; IL'INSKAYA, G.N., tekhn. red.

[Mine surveying operations in shaft sinking by means of work-
ings which meet] Marksheidersko-geodezicheskie raboty pri
prokhodke i uglubke shakhtnykh stvolov vstrechnymi zaboiami.
Moskva, Gosgortekhizdat, 1963. 186 p.          (MIRA 16:8)
         (Mine surveying)   (Shaft sinking)

AVIROM, Leon Saadiyevich, kand. tekhn. nauk; BELYAYEV, B.I.,
        retsenzent; KOSTANDOV, A.I., red.izd-va; CHERKASSKAYA,
        F.T., tekhn. red.

    [Tolerances in large-block house construction] Dopuski v
    krupnoelementnom zhilishchnom stroitel'stve.  Leningrad,
    Gosstroiizdat, 1963.  162 p.              (MIRA 17:1)

BELYAYEV, B.I., kand.tekhn.nauk.

Interpretation of I. I. Pranis-Pranevich's method with block
matrices. Nauch. trudy IGI no.36:111-114 '61.     (MIRA 17:3)

KHLEBNIKOV, Anatoliy Vasil'yevich; CHZHUN-VEY-LIN[Chung Wei-ling];
BELYAYEV, B.I., kand. tekhn. nauk, retsenzent;

[Mechanization and automation of mine surveying computa-
tions] Mekhanizatsiia i avtomatizatsiia marksheiderskikh
vychislenii. Moskva, Nedra, 1964. 182 p.   (MIRA 17:8)

BELYAYEV, B.I., kand. tekhn. nauk, dotsent

Group adjustment and the evaluation of triangulation accuracy.
Izv. vys. ucheb. zav.; geod. i aerof. no.2:15-28 '64.
(MIRA 17:9)
1. Universitet druzhby narodov imeni Patrisa Lumumby.
Rekomendovana kafedroy geodezii.

BELYAYEV, B.I.

Materialization of planned capacity is the final goal of the construction of industrial enterprises. Prom.stroi. 43 no.12:2-4 '65.                                    (MIRA 18:12)

BELYAYEV, B.K., kandidat tekhnicheskikh nauk.

Friction losses of disks revolving in their cylinder.
Sudostroenie 22 no.11:19-22 N '56.                    (MLRA 10:2)

(Disks, Rotating) (Friction)

BELYAYEV, B.L., mayor meditsinskoy sluzhby

Work of the blood transfusion section of the military naval hospital.
Voen.-med.zhur. no.9:67-68 '64.                              (MIRA 18:5)

LOVLYA, S.A.; ZHELTOV, Yu.P.; BELYAYEV,B.M.

Means for improving the hydraulic fractuing method.    Neft.khoz.   38
no.5:43-48  My  '60.                                        (MIRA 13:8)
        (Oil wells--Hydraulic fracturing)

S/186/60/002/005/013/017
A051/A127

AUTHORS:        Belyayev, B. N.; Van-Yun-Yuy, Sinotova, Ye. N.; Nemet, L.;
                Khalkin, V. A.

TITLE:          Separation of astatine from lead, bismuth and thorium, irra-
                diated with protons of 660 MEV energy

PERIODICAL:     Radiokhimiya, v. 2, no. 5, 1960, 603 - 613

TEXT:           The purpose of this article was to develop a quantitative
method for separating radio-chemically pure astatine from irradiated lead,
bismuth and thorium, with fast protons, which would be easily reproduced
and would yield about 60 % astatine from the irradiated targets with a
yield tolerance of $\pm$ 5 %. Development of such a method is hampered by the
insufficient knowledge of the chemical properties of At. In order to estab-
lish the quantitative method for At separation with good reproducibility of
the results the authors claim that it is necessary to investigate the be-
havior of the element at each stage of purification. This was accomplished
on radio-chemically pure At, separated out from thorium as an indicator.
The behavior of At was checked by the gamma-emission, which, in turn, was

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Separation of astatine from lead, .....

recorded by a MC-11 (MS-11) counter. Reference is made to the work of
Neuman H.M. (Ref. 14: J. Inorg. Nucl. Chem., 4, 5/6, 349, 1957) where a
complete description is given of a method for the extraction of At.  The
authors obtained an improved method, using diluted HCl solutions (Figure 1).
Extraction of At increases in the presence of nitric acid. Small quantities
of HF which have been added to the dissolved thorium in nitric acid has no
effect at all on the extraction of At.  The most convenient method for ex-
tracting At from an alkaline solution of sodium stannite after re-extraction
is said to be the co-precipitation of the element with metallic tellurium
from an acidified solution of stannite with HCl.  Kurchatov, B. V., Makhe-
dov V. N. et al. (Ref. 1: ZhETF, 35, 1 (7), 1958) give a complete descrip-
tion of the method.  Co-precipitation of At from HCl solutions with tellur-
ium helps not only to concentrate the At and eliminate the large quantities
of salts present in the solution, but also to conduct an effective purifi-
cation from Sb, Os, Tl and J.  Experiments showed that the presence of small
quantitites of tellurium in the $H_2SO_4$ solution (-10 mg) considerably spoiled
the conditions of distillation of At.  The recommended method developed by
the authors is described as follows:  Based on data of the behavior of At
at each stage of purification it was suggested to dissolve 1 gr. of metallic

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Separation of astatine from lead, ....

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bismuth irradiated with 660 Mev energy protons on the internal beam of the
synchrocyclotron, in 5 ml of concentrated nitric acid, while heating it in
a flask with a reversible cooler; 40 ml of 8 M HCl, saturated with chlorine,
were added to the nitric acid solution. The extraction was carried out
with 60 ml of diisopropyl ether in an extractor equipped with a mechanical
mixer. The organic layer was twice washed with 15 ml of 8 M HCl. The At
was extracted from the ether with 40 ml of 0.1 M solution of sodium stannite
in 2 M NaOH. 10 - 15 mg of sodium tellurite 2 - 3 mg of lanthane (LaCl₃)
and 1 - 2 mg of sodium chloroaurate were added to the alkaline solution.
The solution was separated from the residue by filtration through a glass
filter No. 4. The precipitation of the tellurium with the sodium stannite
was repeated twice. The alkaline filter was acidified with 20 ml of con-
centrated HCl, containing about 0.2 mg of Te to 1 ml. The precipitation
of the Te from the acidic solution was carried out with intensive mixing.
After coagulation of the residue, 5 mg of Te was added twice. The Te re-
sidue, containing At, was separated from the solution by centrifuging,
washed with a 6M HCl and dissolved in a few drops of nitric acid. 20 ml
of 6 M HCl were added to the obtained solution, and the Te was precipitated
with stannous chloride. After coagulation of the precipitate, the preci-

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Separation of astatine from lead, ....

S/186/60/002/005/013/017
A051/A130

pitation of the Te was repeated (5 mg). The formed residue was centrifuged, washed with concentrated HCl and dissolved in 5 ml of 8 M HCl while passing through a gaseous chlorine. The At was separated from the Te by extracting it in to diisopropyl ether. The ether layer (about 6 ml) was washed twice with 1.5 - 2 ml of 8 M HCl and the At was re-extracted with water (twice with 5 ml each time). After extraction a solution was obtained of radio-chemically pure At, about 0.01 M according to HCl, containing traces of the diluent. When extracting At formed from lead, the method is more compli-cated, necessitating first the elimination of lead chloride, which preci-pitates when HCl is added to the nitric acid. The gamma-spectra of At were studied on a scintillation spectrometer. Findings agree well with data of Strominger D., Hollander, J. M., Seaborg G. T. (Ref. 16: Rev. Modern Phys. 30, 2, 799, 1958.) on gamma-emission of $At^{208}$, $At^{209}$ and $At^{210}$. When measuring the At preparations formed from the lead, in addition to the known gamma-lines, 3 lines were found (660 kev with T ≃ 5 hours, 165 kev and 32 kev) which, according to literature data, cannot be attributed to isotopes of At. The total intensity of these lines is about 10 % of the intensity of the entire specimen. The determination of the half-lives of

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Separation of astatine from lead, ....

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A051/A127

the various isotopes of At was carried out with sufficient accuracy only
for samples formed from thorium.   It was impossible to produce radio-
chemically pure At from lead.   In checking the reproducibility of results
of the given method it was noted that comparitively large amounts of At
loss (up to 50 %) was connected mostly with the incomplete extraction of
the At in the various stages of purification.  However, it is pointed out
that these losses can be avoided by acidifying the alkaline solution of
the stannite, containing At with HCl, to which small quantities of Te have
been added.   Here it is assumed that owing to the competition of adsorp-
tion of At on Te, the adsorption of the element by the walls of the glass
vessel is excluded.  The favourable reproduction of results of the yields
makes this suggested method applicable for the determination of absolute
cross-sections of At formation in various nuclear reactions.   There are
6 figures, 3 tables and 16 references: 5 Soviet-bloc, 11 non-Soviet-bloc.
The four recent English language publications read as follows: M. Lefort,
G. Simonoff, X. Farrago, C. r., 248,219, 1959; E. K. Hyde, J. Chem. Educ.
36, 1, 15, 1959; H. M.  Neuman, J.Inorg. Nucl. Chem., 4, 5/6, 349, 1957;
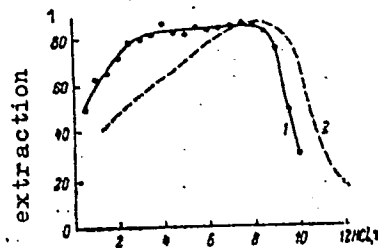D. Strominger, J. M. Hollander, G. T. Seaborg, Rev. Modern Phys., 30, 2,
799, 1958.

Card 5/8

Separation of astatine from lead, ....

Figure 1:
Extraction of At from hydrochloric solutions using diisopropyl ether.  1 - according to data of the present work, 2 - according to data of Ref. 14 (Neuman)
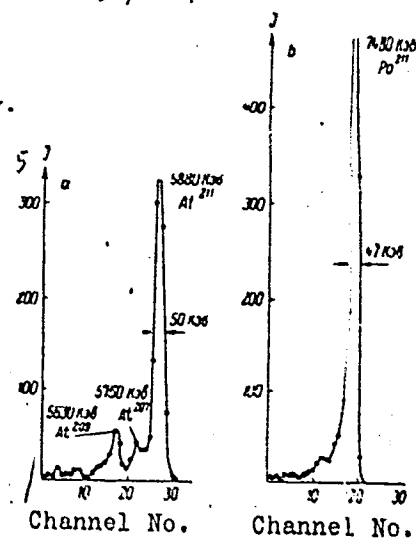
S/186/60/002/005/013/017
A051/A127



Card 6/8

Separation of astatine from lead, ....

Figure 5: Alpha-spectrum of At sample, formed from thorium, irradiated with 660 Kev energy protons.  a - $E_\alpha < 6000$ kev,  b - $E_\alpha > 6000$ kev. J - intensity.



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Separation of astatine from lead, ....

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A051/A127

Figure 6: 1 and 2 - curves of decay of At$^{211}$, plotted from the change of the intensity of the lines $E_\alpha$ = 7430 kev and $E_\alpha$ = 5880 kev, respectively. 3 - decay curve of At$^{209}$, plotted from the change of the intensity of the line $E_\alpha$ = 5630 kev.
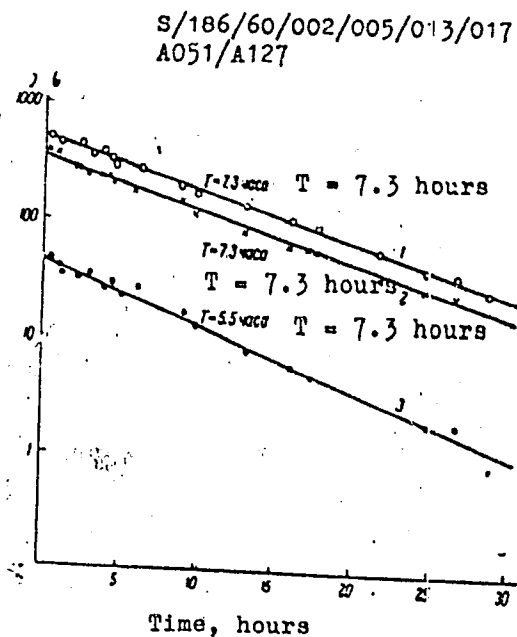
Card 8/8

BELYAYEV, B.N.; KALYAMIN, A.V.; MURIN, A.N.

Probability ratio of $\alpha$-decay and E-capture for the isotopes Po$^{200,201,203}$. Izv. AN SSSR. Ser. fiz. 25 no.7:874-878 Jl '61.

(MIRA 14:7)

1. Radiyevyy institut im. V.G. Khlopina AN SSSR.
   (Alpha rays) (Electrons--Capture) (Polonium--Isotopes)

BELYAYEV, B.N.; KALYAMIN, A.V.; MURIN, A.N.

Reduced derived width $\delta_L^2$ for Po isotopes.  Izv. AN SSSR. Ser. fiz. 25 no.7:879-881 Jl '61.                    (MIRA 14:7)

1.  Radiyevyy institut AN SSSR im. V.G. Khlopina.
    (Polonium—Decay)  (Alpha rays)

BELYAYEV, B.N.; KALYAMIN, A.V.; MURIN, A.N.

Experimental and calculated cross sections of the reaction $Bi^{209}(p, xn)$
Po under bombardment by 135 Mev. protons.  Dokl. AN SSSR  140
no.2:337-339  S '61.
(MIRA 14:9)

1. Radiyevyy institut im. V.G.Khlopina AN SSSR.  Predstavleno
akademikom A.P.Vinogradovym.
(Nuclear reactions)

BELYAYEV, B.N.; MAL'TSEVA, N.S.; MEKHEDOV, V.N.; MIN NAM BUK;
SHIMCHAK, R.A.; SARANTSEVA, V.R., tekhn. red.

[Formation of $At^{209}$ and $At^{207}$ in the bombardment of Bi and Pb with high-energy protons] Obrazovanie $At^{209}$ i $At^{207}$ pri bombardirovke Bi i Pb protonami vysokikh energii. Dubna, Ob"edinennyi in-t iadernykh issledovanii, 1962. 9 p.    (MIRA 15:6)
    (Astatine--Isotopes)    (Protons)

S/824/62/000/000/004/004
B164/B102

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TITLE:       Results of an investigation into the interaction of fast
             protons with heavy nuclei considering fission

SOURCE:      Fizika deleniya atomnykh yader. Ed. by N. A. Perfilov and
             V. P. Eysmont, Moscow, Gosatomizdat, 1962, 203 - 209

TEXT:  The momentum distribution and the excitation energy of the reaction
products for interaction of 135-Mev protons with $Bi^{209}$ nuclei is studied.
This is done by the Monte-Carlo method assuming a "cascade-evaporation
model". Further, the effect of the evaporation on the momentum spectrum of
the recoil nuclei is examined. Also the mean values of the recoil momenta
and of the excitation energy for the nucleus undergoing fission as well
as the fission cross section are determined. To calculate the excitation
energy of the nucleus, the spectra of the components of the recoil momenta
parallel $(p_{\parallel})$ and perpendicular $(p_{\perp})$ to the direction of the incident
protons are analyzed for the pure cascade process and for the cascade-plus-
evaporation process. Comparison shows that when evaporation is taken into
account the momentum spectra appear broader and $p_{\perp}$ to be increased by 24%.
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